AMENDMENTS

Listing of Claims:

The following listing of claims replaces all previous listings or versions thereof:

1. (Canceled)

2. (Currently Amended) The method of claim 38~~1~~, wherein phosphorylation of an epidermal growth factor receptor, a fibroblast growth factor receptor, an acidic fibroblast growth factor receptor, a basic fibroblast growth factor receptor, an insulin like growth factor receptor, a nerve growth factor receptor, a transforming growth factor α receptor, a transforming growth factor β receptor, a neuregulin receptor, a betacellulin receptor, a amphiregulin receptor, a heparin binding EGF-like growth factor receptor, or a cytokine growth factor receptor is determined.

3. (Currently amended) The method of claim 38~~1~~, wherein said tissue sample is a hair follicle.

4. (Withdrawn) The method of claim 1, wherein said tissue sample comprises buccal mucosa tissue.

5. (Withdrawn) The method of claim 1, wherein said tissue sample comprises a pap-smear sample.

6. (Withdrawn) The method of claim 1, wherein said tissue sample comprises bladder-wash cells.

7. (Withdrawn) The method of claim 1, wherein said tissue sample comprises skin scrapings.

8. (Currently amended) The method of claim 38~~1~~, wherein determining growth factor receptor phosphorylation comprises:

(a) obtaining a sample comprising the growth factor receptor;

(b) contacting the sample with an anti-phosphorylated growth factor receptor antibody;

(c) detecting the bound antibody.

9. (Original) The method of claim 8, wherein the antibody further comprises a detectable label.

10. (Original) The method of claim 8, wherein a second antibody that comprises a detectable label is contacted prior to the detection.

11. (Original) The method of claims 9 and 10, wherein the detectable label is selected from a group comprising a fluor, an enzyme, or a radionuclide.

12. (Original) The method of claim 8, wherein said detecting comprises immunoflourescence.

13. (Original) The method of claim 8, wherein said detecting comprises colorimetric detection.

14. (Currently amended) The method of claim 38~~1~~, wherein the patient has cancer of the breast, prostrate, colon, pancreas, head and neck, bladder, blood, bone, bone marrow, brain, esophagus, gastrointestine, brain, kidney, liver, lung, nasopharynx, ovary, skin, stomach, or uterus.

15.-33. (Canceled)

34. (Currently amended) The method of claim 38~~1~~, wherein said change is a decrease in the growth factor receptor phosphorylation.

35. (Previously presented) The method of claim 1, wherein said change is an increase in the growth factor receptor phosphorylation.

36. (Previously presented) The method of claim 2, wherein the growth factor receptor is epidermal growth factor receptor.

37. (Canceled)

38. (Currently amended) ~~The method of claim 37~~ A method for determining the effectiveness of a cancer treatment comprising:

(a) obtaining a non-tumor skin, mucosal or hair follicle tissue sample by non-invasive procedures from a patient undergoing the cancer treatment with a chemotherapeutic agent, wherein i) said cancer is growth factor related and expresses a growth factor receptor, ii) said cancer treatment is directed to said growth factor receptor, and iii) ~~wherein~~ said chemotherapeutic agent is a protein kinase inhibitor; and

(b) determining growth factor receptor phosphorylation in said tissue.

39. (Previously presented) The method of claim 38, wherein said protein kinase inhibitor is a tyrosine kinase inhibitor.

40. (Previously presented) The method of claim 39, wherein said chemotherapeutic agent is PKI166.

41. (Previously presented) The method of claim 39, wherein said chemotherapeutic agent is the C225 antibody.

42. (Previously presented) The method of claim 38, wherein said protein kinase inhibitor is a serine threonine kinase inhibitor.

43. (Canceled)